

Amendments (Clean copy)

In please amend the application as follows:

In the Claims

Please add new claims as follows:

31 34. A method for forming a giant magnetoresistive (GMR) sensor element comprising:

forming a seed layer over a substrate, the seed layer being formed of a magnetoresistive resistivity sensitivity enhancing material selected from the group consisting of nickel chromium alloys, nickel -chromium-copper alloys and nickel-iron-chromium alloys;

forming a metal oxide buffer layer over the seed layer; said metal oxide buffer layer comprised of NiO or alpha Fe₂O₃;

forming a free ferromagnetic layer over said metal oxide buffer layer; said free ferromagnetic layer is comprised of: CoFe, CoFe/NiFe, or Co/NiFe;

forming a non-magnetic conductor spacer layer over said free ferromagnetic layer;

forming a pinned ferromagnetic layer over the non-magnetic conductor spacer layer ; and

forming a pinning material layer over the pinned ferromagnetic layer; and

forming a capping layer over said pinning material layer.

32 35. A spin valve giant magnetoresistance (SVGMR) sensor comprising:

a seed layer over a substrate, said seed layer being formed of a magnetoresistive resistivity sensitivity enhancing material selected from the group consisting of nickel chromium alloys, nickel -chromium-copper alloys and nickel-iron-chromium alloys;

a metal oxide buffer layer over the seed layer; said metal oxide buffer layer comprised of NiO or alpha Fe₂O₃;

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and
a free ferromagnetic layer over said metal oxide buffer layer; said free ferromagnetic layer is comprised of: CoFe, CoFe/NiFe, Co/NiFe;

a non-magnetic conductor/spacer layer over said free ferromagnetic layer;

a pinned ferromagnetic layer over the non-magnetic conductor spacer layer ;

and

a pinning material layer over the pinned ferromagnetic layer; and

a capping layer over said pinning material layer.
